



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/732,717

12/10/2003

Eric Arthur Johnson

2003-2

2035

34468

7590

04/27/2006

ADVANCED DESIGN CONSULTING, INC.

126 RIDGE RD.,

P.O. BOX 187

LANSING, NY 14882-0187

EXAMINER

EDWARDS JR, TIMOTHY

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/732,717

Applicant(s)

JOHNSON ET AL.

Examiner

Timothy Edwards, Jr.

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-22 is/are rejected.
- 7) ☐ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eric Johnson on April 13, 2006.

The application has been amended as follows:

IN THE CLAIMS:

Please delete claim 23.

DETAILED ACTION

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the L-R-C circuit and means for measuring the change in resonance frequency of the sensor's LRC circuit must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4,6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watters et al '963, and further in view of Gambino et al '819.

Considering claim 1, Watters discloses an event-recording devices with identification codes comprising, a) an enclosure for embedding in concrete (see col 31, line 63 to col 32, line 5); b) detecting means connected to the enclosure for detecting at least one

Art Unit: 2612

environmental parameter in concrete (see col 6, lines 60-66), the detecting means comprising at least one capacitive element for measuring capacitive change (see col 9, lines 57-63 and col 10, lines 30-39); c) Watters does not specifically recite the use of an active material being liable to respond to the environmental parameter. However, Watters discloses the use of chemical, dielectric and permittivity sensors. Watters, also discloses in col 14, lines 43-51 the use of thin solder bridges connected to the antenna, and part of the sensing means. Applicant admits the use of active material, which responds to the environmental parameter are well known in the art (see pages 27-28). Therefore, it would have been obvious to one of ordinary skill in the art to include material in the sensing device of Watters because Watters disclose a device, which respond to the environmental parameter and is part of the antenna. Also, applicant admits the use of this material is well known in the art; d) an RFID chip mounted within enclosure and connected to the detecting means (see col 12, lines 19-23); e) an antenna operable connected to the RFID chip and the detecting means (see col 12, lines 57-61 and col 14, lines 2-14), Watters discloses in col 14, lines 43-51 the use of an antenna, whose resonant frequency shifts. Watters do not specifically recite the antenna being part of an L-R-C circuit. Gambino teaches in paragraphs [0068-0070] the antenna being part of RLC whose resonant frequency shifts within a frequency band with respect to the parameter sensed. Therefore it would have been obvious to one of ordinary skill in the art to use an RLC sensing circuit in the Watters system as taught by Gambino because both references are concern with receiving data from devices embedded in

Art Unit: 2612

concrete and Watters discloses the use of an antenna whose resonant frequency shifts with respect to a recorded event.

Considering claim 2, Watters discloses the limitation of this claim (see col 13, lines 38-40).

Considering claim 3, Watters discloses the limitation of this claim (see col 8, lines 14-22).

Considering claim 4, Watters discloses the limitation of this claim (see col 14, lines 35-49). Applicant admits on last paragraph of pages 32-33 this limitation is well known in the art.

Considering claim 6, Watters discloses the limitation of this claim (see col 16, lines 34-44). Applicant admits in paragraph of page 39 this limitation is well known in the art.

Considering claim 7, Watters does not specifically recite the capacitive change is effected by movement of the capacitive element. Waters discloses the use of a plurality of sensor types (to include capacitance sensor, see col 9, line 9 to col 10, line 53).

Waters discloses in col 15, lines 32-47 the use of a capacitive device, which senses the deflection of a membrane to indicate an event. Therefore, it would have been obvious to one of ordinary skill in the art to use any type of capacitance sensor in the Watters

Art Unit: 2612

system because Watters discloses the use of capacitive sensor in a parameter-sensing environment.

Considering claim 8, Watters discloses the limitation of this claim (see col 10, lines 5-10).

Considering claims 9, 10 and 11, the limitations of these claims are interpreted and rejected as stated in claim 7.

Considering claims 12 and 13, Watters discloses the limitations of these claims (see col 9, lines 57-59 and col 15, lines 33-47).

Considering claim 14, Watters discloses the limitation of this claim (see col 10, lines 5-16).

Considering claims 15-19, Watters discloses the limitations of these claims (see col 9, lines 57-59).

Considering claim 20, Watters discloses the limitation of this claim (see col 10, lines 30-35).

Art Unit: 2612

Considering claim 21, Watters does not specifically recite the use of a hydrogel as an active material. Waters discloses in col 10, lines 40-53 the use of silicon-base sensing means, means for detecting embrittlement, means for detecting water contents or the present of a waterproofing solvent Waters discloses in col 15, lines 33-47 the use of a device comprising a membrane which when deflects indicates an event has happened. Therefore, it would have been obvious to one of ordinary skill in the art to use a hydrogel active material in the Watters device because Watters discloses the desire to use active materials in his sensing devices.

Considering claim 22, Watters discloses the limitation of this claim (see col 23, lines 10-32).

Allowable Subject Matter

5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hamel et al '790, Kelly et al '182 and Sorrells et al '866 disclose the use of RFID tags sensors embedded in concrete.

7. Any inquiry concerning this communication should be directed to Examiner Timothy Edwards, Jr. at telephone number (571) 272-3067. The examiner can normally be reached on Monday-Thursday, 8:00 a.m.-6:00 p.m. The examiner cannot be reached on Fridays.

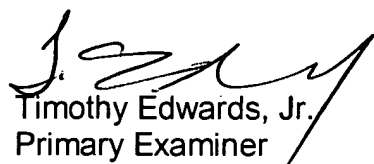
If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached at (571) 272-7308.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-4700, Mon-Fri., 8:30 a.m.-5:00 p.m.

Any response to this action should be fax to:

(571) 273-8300 (for formal communications intended for entry).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> or contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Timothy Edwards, Jr.
Primary Examiner
April 24, 2006